

Abstract

A method of rendering a surface of a metal substrate substantially acid impervious. The method includes first placing the surface in a field of treatment, then depositing
5 a mixture of a high-temperature resistant polymer particulate such as polyamide particulate and a curable powder adhesive on the surface, and finally subjecting the surface-coated metal substrate to a curing treatment sufficient to cure the powder adhesive and thereby adhere the polymer particulate as a film
10 on the surface. A steel substrate coated in accord with the present methodology is particularly useful as a curing fixture upon which resin-impregnated fiber of polymer composite material is placed to thereby give molded parts made therefrom a desired shape. Production of a part is accomplished by
15 vacuum bagging the composite material to the steel fixture and curing the so-produced part in place on the fixture in an autoclave at an elevated temperature. In this manner the acid impervious curing fixture allows production of composite parts without the danger of leaching iron from the fixture to thus
20 assure full-utility part fabrication.

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